

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Currently Amended) A method for fabricating ~~arbitrary~~ optical density profiles on a substrate, comprising:  
~~creating~~ providing a mask having a plurality of holes[,]  
formed therein; and  
providing onto the substrate through the holes of the mask a material having a different transmission coefficient than the substrate, the material providing a desired  
~~and sufficient~~ optical density range, and the material also providing an apodization  
pattern on the substrate ~~onto the substrate through the holes of the mask.~~

2. (Currently Amended) The method of claim 1 wherein providing the mask comprises:

depositing a coating on a ~~polished~~ mask substrate,  
patterning ~~that~~ the coating, and  
removing ~~a section or all~~ at least a portion of the mask substrate.

3. (Currently Amended) The method of claim 2 wherein the ~~polished~~ substrate is silicon.

4. (Original) The method of claim 2 wherein the deposited coating is silicon nitride.

5. (Original) The method of claim 2 wherein said patterning includes photolithographic processes.

6. (Original) The method of claim 2 wherein said patterning includes laser ablation.

7. (Currently Amended) The method of claim 2, wherein said removing includes etching.

8. (Original) The method of claim 7 wherein said etching includes using potassium hydroxide.

9. (Canceled)

10. (Canceled)

11. (Original) The method of claim 1, wherein the substrate is fused silica.

12. (Original) The method of claim 1, wherein said providing includes

evaporating a metal.

13. (Original) The method of claim 1, further comprising, after said providing, fabricating a plurality of lenses on the substrate.

14. (Original) The method of claim 1, further comprising, before said providing, fabricating a plurality of lenses on the substrate.

15. (Original) The method of claim 1, wherein the substrate is reflective and the material is more absorbing than the substrate.

16. (Original) The method of claim 1, wherein the substrate is transmissive and the material is more reflective than the substrate.

17. (Original) The method of claim 1, further comprising spacing the mask from the substrate before said providing.

18. (Original) The method of claim 1, further comprising providing a phase controlling surface on the substrate.

Claims 19-25 (Canceled)

26. (New) The method of claim 14 wherein the material is provided on a same side of the substrate as the plurality of lenses are fabricated.
27. (New) The method of claim 26, wherein the material is provided on the plurality of lenses.
28. (New) The method of claim 1, wherein the material includes nickel.
29. (New) The method of claim 1 wherein the mask provides Gaussian apodization to the arbitrary optical density profiles.
30. (New) The method of claim 1, further including a step of spacing the mask a predetermined distance apart from a surface of the substrate prior to providing the material onto the substrate through the holes of the mask.
31. (New) The method of claim 1, wherein the plurality of holes vary in size.
32. (New) The method of claim 1 wherein the holes in the mask remain fixed in position relative to the substrate while the material is provided through the holes onto the substrate.

33. (New) A method for fabricating an optically transmissive device,  
comprising:  
    providing an optically transmissive substrate having a plurality of lenslets  
    formed thereon; and  
    depositing onto the optically transmissive substrate through a mask a material  
    having a different optical transmission coefficient than the optically transmissive  
    substrate, the deposited material providing apodized apertures on the substrate.
34. (New) The method of claim 33, wherein each apodized aperture is aligned  
with a corresponding one of the lenslets.
35. (New) The method of claim 33, wherein an intensity profile of the  
apodized apertures is Gaussian.
36. (New) The method of claim 33, wherein depositing the material includes  
evaporating a metal.
37. (New) The method of claim 32, wherein the mask has a plurality of holes.
38. (New) A method of fabricating optical density profiles onto a substrate,  
comprising:  
    providing a substrate;

depositing onto the substrate a material having a different optical transmission coefficient than the substrate, the material being deposited to have formed therein on the substrate an array of apodized apertures.

39. (New) The method of claim 38, wherein depositing the material includes evaporating the material through a mask having at least one hole therein spaced apart from the substrate.

40. (New) The method of claim 38, wherein an intensity profile of the apodized apertures is Gaussian.

41. (New) A method for fabricating optical density profiles on a substrate, comprising:

providing a substrate;

providing a mask having a plurality of holes formed therein, the mask being separated and spaced apart from the substrate by a fixed distance; and

providing onto the substrate through the holes of the mask a material having a different transmission coefficient than the substrate, the material providing a desired optical density range on the substrate.

42. (New) The method of claim 41, wherein the providing the material onto the substrate includes evaporating a metal.

43. (New) The method of claim 41, wherein a density of the holes is non-uniform along a radial distance from a center of the mask.
44. (New) The method of claim 41, wherein the mask and its holes are held in a fixed position relative to the substrate while the material is provided onto the substrate through the holes of the mask.
45. (New) The method of claim 41, wherein the holes in the substrate are aligned with a pattern of the material deposited onto the substrate.